

State of Rhode Island  
EMERGENCY OPERATIONS PLAN

PANDEMIC FLU ANNEX – Version 1  
December 20, 2005

SUBJECT

I.	PURPOSE.....	2
II.	HAZARD, SITUATION, AND ASSUMPTIONS .....	2
	A. HAZARD.....	2
	B. SITUATION .....	2
	C. ASSUMPTIONS .....	3
III.	CONCEPT OF OPERATIONS .....	4
	A. GENERAL CONCEPTS.....	4
	1. Continual testing and revision of statewide plans .....	4
	2. Coordination with the federal government .....	5
	3. Regionalization within the state.....	5
	4. Public-private partnership to mobilize resources for response.....	6
	B. RESPONSE LEVELS .....	6
IV.	ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES .....	7
	A. ORGANIZATION.....	7
	1. Planning.....	7
	2. Emergency Operations.....	8
	3. Notification .....	8
	4. Actions.....	8
	5. Direction and control.....	8
	B. RESPONSIBILITIES .....	8
V.	REFERENCES AND AUTHORITIES .....	9
VI.	EMERGENCY SUPPORT FUNCTIONS (ESFS) THAT ARE BEING UPDATED FOR PANDEMIC FLU.....	10

## **I. PURPOSE**

The nature of a pandemic flu emergency is different from other emergencies for which State agencies plan. An outbreak of the pandemic influenza virus in Rhode Island will be statewide, affect up to 50% of the workforce, and last for up to two months. The Pandemic Flu Annex to the State Emergency Operations Plan (EOP) contemplates the implications of such an emergency on the plans and systems that are activated under the current version of the EOP. Some plans and systems will not change, but others will. Until the State EOP is officially revised as needed to meet the needs of a pandemic flu emergency, this Annex includes notes on the activities specific to pandemic flu response for some primary State agencies and their private sector partners. This Annex stands apart from, but relates to, the Department of Health's Pandemic Influenza Plan, which serves as the plan for implementing Emergency Support Function 8 – Health and Medical Services during a pandemic influenza event.

## **II. HAZARD, SITUATION, AND ASSUMPTIONS**

### **A. Hazard**

An influenza pandemic is a global outbreak of disease that occurs when three conditions are met: a new influenza A virus appears or “emerges” in the human population, it causes serious illness in people, and it spreads easily from person to person worldwide. This is different from seasonal outbreaks or “epidemics” of influenza, which are caused by subtypes of influenza viruses that are already in existence among people.<sup>1</sup> The 20th century witnessed three influenza pandemics of note, the “Spanish flu” of 1918-1919, the “Asian flu” of 1957-1958, and the “Hong Kong flu” of 1968-69. Each pandemic led to higher-than-usual rates of infection, illness, and death in the population worldwide.

Just like seasonal flu, a pandemic flu virus will be spread by coughing and sneezing. People infected with a pandemic flu virus will be contagious 24-48 hours before they display symptoms of infection. Public health officials estimate that during a pandemic, every one person with the disease will transmit the disease to two or three additional people. Because people do not have pre-existing immunity to a new virus, a pandemic flu virus will result in more serious disease in humans than seasonal flu. The World Health Organization estimates that international air travel may cause the influenza virus to infect all countries within three months of its emergence, no matter where it originates.<sup>2</sup>

### **B. Situation**

There is no pandemic flu in the world today, but recent reports of a new influenza virus infection transmitted from birds to humans in Asia have drawn attention to the possibility that pandemic flu could arrive in the U.S. soon.

The subtype of avian influenza that is currently receiving the most attention is Influenza A H5N1, which has caused severe outbreaks of illness among birds in Southeast Asia. This strain has caused illness in 130 humans in five countries (Cambodia, China, Indonesia, Thailand, and Viet Nam), and resulted in 67 human deaths.<sup>3</sup> In all these

---

<sup>1</sup> [www.cdc.gov/flu/pandemic/](http://www.cdc.gov/flu/pandemic/)

<sup>2</sup> <http://www.who.int/csr/disease/influenza/pandemic10things/en/index.html>

<sup>3</sup> Pandemic Influenza Update, [www.cdc.gov](http://www.cdc.gov), November 23, 2005.

cases, persons infected with H5N1 influenza virus were in close contact with sick birds and therefore experienced symptoms and complications more severe than what would be caused by a strain of the virus that has mutated so that it can spread easily from person to person. The H5N1 influenza virus has not yet mutated to a form in which it is transmitted human to human.

There have been no reported cases of Influenza A H5N1 in birds in North America. Even if there is an outbreak of this subtype of influenza among birds here, it would not necessarily lead to pandemic flu among humans. If the disease is contagious from birds to humans, only humans that have close contact with bird droppings or sick birds themselves are at risk of contracting the disease. Pandemic flu will only emerge if the virus changes in such a way that it can spread from human to human.

### **C. Assumptions**

- Susceptibility to the pandemic influenza virus will be universal.
- The clinical disease attack rate will likely be 30% or higher in the overall population during the pandemic. Illness rates will be highest among school-aged children (about 40%) and decline with age. Among working adults, an average of 20% will become ill during a community outbreak.
- Some persons will become infected but not develop clinically significant symptoms. Asymptomatic or minimally symptomatic individuals can transmit infection and develop immunity to subsequent infection.
- Of those who become ill with influenza, 50% will seek outpatient medical care.
- Rates of absenteeism will depend on the severity of the pandemic.

The estimates of illnesses, medical care required, and deaths in Rhode Island due to pandemic flu (Table 1) assume that an effective vaccine or anti-viral will not be widely available to prevent spread of the disease or significantly reduce its symptoms. A pandemic may occur in two or more waves of influenza activity, each wave lasting about two months. The second wave may occur three to twelve months after the end of the first wave, and have about the same health impact as the first wave. Health care workers and first responders will become infected at about the same rate as the rest of the population.

*Table 1: Estimated cases of illness during pandemic flu in Rhode Island*

	Average Flu Season Estimate	Moderate Severity Flu Pandemic Estimate	Severe Flu Pandemic Estimate
Time period	4 months	2 months	2 months
Illnesses:	125,000	250,000	300,000
Outpatient visits:	25,000	100,000	150,000
Hospitalizations:	670	3,027	34,650
ICU Care:	50	425	5197
Mechanical ventilation:	25	227	2,599
Deaths:	120	731	6,661

During a flu pandemic, more Rhode Islanders will experience flu symptoms and complications that will require hospitalization or even intensive care. At the same time that demand on the health care system increases, the health care workforce will be reduced due to illness (see Table 2.) The number of patients seeking treatment for flu (in addition to emergency and chronic health needs that exist in a non-pandemic situation) is estimated to be, on average, 2,252 daily over the two month course of the pandemic.

*Table 2: Estimated supply vs. demand for health care services during pandemic flu*

Health care worker	Currently in RI	Estimated number available during a pandemic
Physicians	3,021	1,500
Nurses (RN, NP, LPN, CNA)	21,225	10,750
Physician Assistants	164	82
Pharmacists (and aides)	2,000	1,000
EMTs	4,279	2,140

Depending on the virulence of the strain of the influenza virus that appears in a pandemic, many more deaths can be expected than during a normal flu season. These deaths may affect children, young adults, and generally healthy adults, as well as populations that are traditionally susceptible to complications from the flu.

### III. CONCEPT OF OPERATIONS

#### A. General Concepts

##### 1. Continual testing and revision of statewide plans

Emergency planning is an iterative process. Rhode Island's Statewide Pandemic Flu Working Group will update pandemic flu plans as the federal government updates its guidance to states, as Rhode Island coordinates its plan with neighboring states, and as State agencies, cities, towns, and local businesses learn from testing their plans in local exercises.

2. Coordination with the federal government

Because pandemic flu will be an international and national event, Rhode Island will rely on federal agencies such as the U.S. Department of Health and Human Services (DHHS) and U.S. Department of Homeland Security (DHS), and national organizations such as the Association of State and Territorial Health Officers (ASTHO), to provide guidance to states on issuing policies during a pandemic that are consistent across states. In turn, Rhode Island officials will inform the development of these policies based on local conditions. One example of a policy that is critical for coordination is the order in which health care workers and others will be prioritized to receive vaccine or anti-viral treatment if available.

When a pandemic flu strain emerges and arrives in the U.S., the Centers for Disease Control and Prevention (CDC) will closely monitor and track its spread based on data from the states. Rhode Island currently contributes to these surveillance activities by reporting data on flu activity in Rhode Island.

The federal government currently has plans to purchase courses of anti-viral treatment, if available, for states to distribute. Rhode Island will work with federal agencies to obtain sufficient anti-virals at a cost shared by state and federal government.

3. Regionalization within the state

Rhode Island is already regionalized to coordinate local responses to emergency events, as evidenced by existing local emergency planning committees, emergency medical service regions, and city and town mutual aid agreements. Because the health care system will be on the front lines during a flu pandemic, new health care regions that coincide with established regions for medical and non-medical service delivery will be activated during a pandemic flu event (see Table 3). These regions will include hospitals and alternate care sites that may be used to address steep increases in demand for acute care services during a pandemic flu event. Hospitals will coordinate the use of health care personnel and non-medical volunteers to deliver care at these sites and at other health care facilities. Additionally, hospitals will work with RIEMA and other volunteer organizations in order to deploy equipment and physical resources that are essential for the delivery of mass care at alternate care sites.

Table 3: Health care service regions and proposed coordinating hospital

Health Care Service Regions (from North to South)	Hospital
▪ Burrillville, North Smithfield, Woonsocket	Landmark
▪ Cumberland, Lincoln, Central Falls, Pawtucket	Memorial
▪ Glocester, Smithfield, Johnston, North Providence	Fatima
▪ Foster, Scituate, Cranston	Roger Williams
▪ Providence	Rhode Island
▪ East Providence, Barrington, Warren, Bristol	Miriam
▪ Jamestown, Portsmouth, Middletown, Newport, Tiverton, Little Compton	Newport
▪ Coventry, West Warwick, Warwick, West Greenwich, East Greenwich	Kent
▪ Exeter, North Kingstown, Richmond, South Kingstown, Narragansett	South County
▪ Hopkinton, Westerly, Charlestown, New Shoreham	Westerly

RIEMA is also developing regional Emergency Operations Centers (EOCs) that will coordinate with these health care service regions to assure the fair and efficient distribution of non-medical goods and services in each region during a pandemic flu event. These regional EOCs will manage resources within their regions first, and call to the statewide EOC for additional assistance as needed.

#### 4. Public-private partnership to mobilize resources for response

Ongoing planning and exercise efforts – up until the time of a pandemic outbreak – will be done in a public-private partnership. Similarly, the extraordinary cost of supplies, equipment, and personnel needed to treat and care for people infected with pandemic flu, and to support the psycho-social needs of first responders and other medical and non-medical care providers, must be borne jointly by federal and state government and commercial insurers, businesses, and health care providers in the private sector. The effort to disseminate public information during a pandemic flu event also depends upon partnership between private sector media outlets (to keep news sources open) and state agencies (to develop public health messages.)

## B. Response Levels

The World Health Organization (WHO) has defined six phases of a pandemic to assist with planning and response activities (see Table 4). The federal government will identify and declare each phase for the purposes of coordinating national, state and local response. The response activities for pandemic flu will escalate according to these Pandemic Phases.

The world is currently in Phase 3, a Pandemic Alert period, because humans in Southeast Asia have been infected with a new subtype of the influenza virus but human-to-human transmission of the disease is rare.

*Table 4: WHO Pandemic Phases*

<b>WHO Pandemic Phase</b>	<b>Definition</b>
Inter-Pandemic Period Phase 1.	No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human infection or disease is considered to be low.
Inter-Pandemic Period Phase 2.	No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.
Pandemic Alert Phase 3.	Human infection(s) with a new subtype but no human-to-human spread or at most rare instances of spread to a close contact.
Pandemic Alert Phase 4.	Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.
Pandemic Alert Phase 5.	Larger cluster(s) but human-to-human spread is still localized, suggesting that the virus is becoming increasingly better adapted to humans but may not yet be fully transmissible (substantial pandemic risk).
Pandemic Period Phase 6.	Pandemic phase: increased and sustained transmission in the general population.
Post-Pandemic	Return to the Inter-Pandemic Period (Phase 1).

#### **IV. ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES**

##### **A. Organization**

###### **1. Planning**

A Statewide Pandemic Flu Working Group, comprised of state officials, city and town officials, private citizens, businesses, community organizations, and colleges and universities supervises and coordinates ongoing planning and exercise activities across all sectors. The focus of planning is on how essential service providers will continue operations during a pandemic flu.

Hospitals, other health care providers, the Department of Health, RIEMA, and other volunteer organizations will participate in testing the concept of health care

service regions, and revise those plans accordingly. These regions will be used to organize the equitable and efficient delivery of health care services during a flu pandemic.

Ethicists will advise the prioritization of populations that would receive vaccines and/or anti-viral treatments (if available), as well as determine a system for distributing other limited supplies equitably over a sustained Pandemic Period.

The Statewide Pandemic Flu Working Group will coordinate plans for making the necessary public-private investment in medication and other supplies that could help slow the transmission of disease during a pandemic flu event.

## **2. Emergency Operations**

Once the arrival of the pandemic is declared – either on the basis of state or national surveillance – RIEMA activates the State's Emergency Operations Center (EOC) to coordinate the escalation of statewide pandemic flu response activities according to the scope and severity of the disease and its transmission. The EOC operates for as long as pandemic flu conditions pose a threat to the health and safety of all Rhode Islanders.

## **3. Notification**

The Joint Information Center (JIC) is activated once a pandemic is declared. The JIC will notify all State agencies, as well as cities, towns, businesses, colleges and universities, faith-based organizations, and community groups, and provide guidance on implementing existing pandemic flu response plans for continuity of operations, continuity of government, and continuity of business. The JIC will broadcast important messages regarding infection control measures and other public health education. Businesses, schools, and providers of critical infrastructure services will receive messages from the EOC and the JIC regarding recommendations to close facilities and reduce congregate activities.

## **4. Actions**

Refer to State EOP and ESFs that have been revised to address needs that arise during pandemic flu.

## **5. Direction and control**

Refer to State EOP for incident command structure.

# **B. Responsibilities**

Each ESF that is activated has designated primary and support agencies, organizations that provide private and volunteer support, and federal agencies that play a role in implementing pandemic flu response activities.



These agencies and organizations are responsible for developing and maintaining pandemic flu response plans on an ongoing basis.

**V. REFERENCES AND AUTHORITIES**

[To be completed by a an inter-departmental group of state agencies' attorneys, led by legal counsel from the Governor's Office and Department of Administration, that is reviewing and answering all legal questions that arise in a manner that is transparent and accountable to the public.]

Working document

## VI. EMERGENCY SUPPORT FUNCTIONS (ESFS) THAT ARE BEING UPDATED FOR PANDEMIC FLU

<b>Emergency Support Function (ESF)</b>	<b>Agency Updating Section</b>
<b>1 Transportation</b> <ul style="list-style-type: none"> <li>- Planning group has met and work is progressing. Group has identified key questions that need to be answered for adequate planning.</li> </ul>	Department of Transportation
<b>2 Communications</b> <ul style="list-style-type: none"> <li>- Planning group has met and work is progressing. Group has identified the existing systems in place and systems planned for future implementation that have application to pandemic flu conditions.</li> </ul>	Department of Administration (new assignment)
<b>3 Public Works and Engineering</b> <ul style="list-style-type: none"> <li>- Planning group has met and work is progressing.</li> </ul>	Department of Transportation
<b>4 Firefighting</b> <ul style="list-style-type: none"> <li>- Planning group has met and work is progressing.</li> </ul>	Emergency Management Agency
<b>5 Information and Planning</b> <ul style="list-style-type: none"> <li>- Planning group has met and work is progressing. Group has identified possible private sector support for providing and staffing informational platforms during under pandemic conditions.</li> </ul>	Emergency Management Agency
<b>6 Mass Care</b> <ul style="list-style-type: none"> <li>- Planning group has met and work is progressing.</li> </ul>	Emergency Management Agency
<b>6A – Social Services (NEW ESF)</b> <ul style="list-style-type: none"> <li>- Given the newness of this topic, the planning group is in its early stages.</li> </ul>	Office of Health and Human Services (new assignment)
<b>7 Resource Support</b> <ul style="list-style-type: none"> <li>- Planning group has met and work is progressing.</li> </ul>	Department of Administration
<b>8 Public Health and Medical</b> <ul style="list-style-type: none"> <li>- Planning group has met and work is progressing. Group issued an updated version of their existing Pandemic Influenza Plan on December 20, 2005.</li> </ul>	Department of Health
<b>9 Search and rescue</b> <ul style="list-style-type: none"> <li>- Existing ESF is suitable for use under pandemic conditions.</li> </ul>	Rhode Island State Police
<b>10 Hazardous Material</b> <ul style="list-style-type: none"> <li>- Existing ESF is suitable for use under pandemic conditions.</li> </ul>	Department of Environmental Management

<b>Emergency Support Function (ESF)</b>	<b>Agency Updating Section</b>
<b>11 Food and Water</b> <ul style="list-style-type: none"> <li>- Existing ESF is suitable for use under pandemic conditions.</li> </ul>	Emergency Management Agency
<b>12 Energy</b> <ul style="list-style-type: none"> <li>- Existing ESF is suitable for use under pandemic conditions.</li> </ul>	Department of Administration
<b>13 Security and Law</b> <ul style="list-style-type: none"> <li>- Planning group has met and work is progressing. Group has identified additional security needs, response activities, and personnel deployment plans under pandemic conditions.</li> </ul>	Rhode Island State Police
<b>14 Military Support</b> <ul style="list-style-type: none"> <li>- Existing ESF is suitable for use under pandemic conditions.</li> </ul>	Rhode Island National Guard
<b>15 Behavioral Health Services</b> <ul style="list-style-type: none"> <li>- Planning group has met and work is progressing. Group has identified additional partners for pandemic flu response and additional responsibilities and response activities in each Pandemic Phase.</li> </ul>	Department of Mental Health, Retardation and Hospitals
<b>16 Animal Care</b> <ul style="list-style-type: none"> <li>- Planning group has met and work is progressing. Group has identified existing animal disease plan and animal disaster plans to be activated at each level of animal infection with the influenza virus.</li> </ul>	Department of Environmental Management
<b>17 Volunteers &amp; Donations</b> <ul style="list-style-type: none"> <li>- Planning group has met and work is progressing. Group has identified key activities of partner agencies under pandemic flu conditions to support non-medical volunteers that will assist at health care delivery sites.</li> </ul>	Emergency Management Agency
<b>18 Private Sector (NEW ESF)</b> <ul style="list-style-type: none"> <li>- Given the newness of this topic, the planning group is in its early stages.</li> </ul>	Emergency Management Agency
<b>19 External Affairs (NEW ESF)</b> <ul style="list-style-type: none"> <li>- Planning group has met and work is progressing. Group has identified key partners, as well as their responsibilities and response activities in each Pandemic Phase.</li> </ul>	Interagency Team with Governor's Office (new assignment)